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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
VoiceStream Wireless Corporation,	)	
	)	
and	)	
	)	
Powertel, Inc.,	)	IB Docket No. 00-187
	)	
Transferors,	)	
	)	
and	)	
	)	
Deutsche Telekom AG,	)	
	)	
Transferee.	)	

DECLARATION OF J. GREGORY SIDAK

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INTRODUCTION

1. I have been asked by Deutsche Telekom AG (Deutsche Telekom) to assess how Deutsche Telekom's acquisition of VoiceStream Wireless Corporation (VoiceStream) will affect consumer welfare in the United States and whether gains in consumer welfare come at the expense of the welfare of U.S. producers. As I discuss below, there are four identifiable

constituencies of producers affected by the transaction. Three of them clearly benefit. The fourth does not, but for reasons that should not raise policy concerns.

QUALIFICATIONS

2. My professional qualifications for submitting this expert affidavit are as follows.

3. My name is J. Gregory Sidak. I am the F. K. Weyerhaeuser Fellow in Law and Economics at the American Enterprise Institute for Public Policy Research (AEI) in Washington, D.C., where I have directed AEI's Studies in Telecommunications Deregulation since 1992. I am also the president and chief executive officer of Criterion Economics, L.L.C., an economic consulting firm in Washington, D.C., that has expertise in antitrust and regulatory issues concerning telecommunications, the Internet, and other network industries.

4. I have worked in the federal government on three occasions. From 1987 to 1989, I was deputy general counsel of the Federal Communications Commission (FCC). From 1986 to 1987, I was senior counsel and economist to the Council of Economic Advisers in the Executive Office of the President. From 1981 to 1982, I served as a law clerk to Chief Judge Richard A. Posner during his first term on the U.S. Court of Appeals for the Seventh Circuit. In addition to having worked in government, I have previously worked, as an attorney in private practice, on numerous antitrust cases and federal administrative, legislative, and appellate matters concerning competition policy in telecommunications and other network industries.

5. My academic research concerns regulation and strategy in telecommunications and other network industries, antitrust policy, and constitutional law issues concerning economic regulation. I am the author or co-author of five books concerning pricing, costing, competition, and

investment in regulated network industries,[1] and of more than thirty scholarly articles in law reviews and economics journals. One of my books is *Foreign Investment in American Telecommunications* (University of Chicago Press 1997). I am also the editor of a book evaluating the implementation of the Telecommunications Act of 1996[2] and co-editor of another book comparing telecommunications deregulation in the United States with that in Germany.[3] I have testified before committees of the U.S. Senate and House of Representatives. My writings have been cited by the Supreme Court, by the lower federal and state supreme courts, and by state and federal regulatory commissions. I have been a senior lecturer at the Yale School of Management, where I taught a course on telecommunications regulation and strategy with Professor Paul W. MacAvoy.

6. I have been a consultant on regulatory and antitrust matters to the Antitrust Division of the U.S. Department of Justice and the Canadian Competition Bureau, and to more than thirty companies in the telecommunications, electric power, natural gas, mail and parcel delivery, broadcasting, newspaper publishing, and computer software industries in North America, Europe, Asia, and Australia.

7. From Stanford University, I earned A.B. (1977) and A.M. (1981) degrees in economics and a J.D. (1981) in law. I was a member of the *Stanford Law Review*.

8. I file this declaration in my individual capacity and not on behalf of the American Enterprise Institute.

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1. J. GREGORY SIDAK & DANIEL F. SPULBER, DEREGULATORY TAKINGS AND THE REGULATORY CONTRACT: THE COMPETITIVE TRANSFORMATION OF NETWORK INDUSTRIES IN THE UNITED STATES (Cambridge University Press 1997); J. GREGORY SIDAK, FOREIGN INVESTMENT IN AMERICAN TELECOMMUNICATIONS (University of Chicago Press 1997); WILLIAM J. BAUMOL & J. GREGORY SIDAK, TOWARD COMPETITION IN LOCAL TELEPHONY (MIT Press & AEI Press 1994); WILLIAM J. BAUMOL & J. GREGORY SIDAK, TRANSMISSION PRICING AND STRANDED COSTS IN THE ELECTRIC POWER INDUSTRY (AEI Press 1995); J. GREGORY SIDAK & DANIEL F. SPULBER, PROTECTING COMPETITION FROM THE POSTAL MONOPOLY (AEI Press 1996).

2. IS THE TELECOMMUNICATIONS ACT OF 1996 BROKEN? IF SO, HOW CAN WE FIX IT? (J. Gregory Sidak, ed., AEI Press 1999).

SUMMARY OF CONCLUSIONS

9. Part I of this declaration explains why the consumer benefits of direct foreign investment are unaffected when the investing company is partially owned by a government. Foreign direct investment increases competition in the market for telecommunications services in the United States, increases the supply of capital in the United States, and generates beneficial spillovers for U.S. telecommunications firms. Because each of these benefits is unrelated to the nature of the shareholders of the investing company, the partial government ownership of Deutsche Telekom cannot prevent those benefits from accruing to U.S. consumers.

10. Part II explains how economics can be used to predict the likely winners and losers created by Deutsche Telekom's investment in the U.S. telecommunications sector. An invigorated VoiceStream, with access to Deutsche Telekom's technology, expertise, and resources, will provide increased competition in the provision of wireless services in the United States. Consumers will benefit from increased competition in the form of improved services, lower prices, or both. I discuss which categories of producers are affected by the transaction, concluding that only U.S. incumbent wireless carriers could potentially suffer from Deutsche Telekom's acquisition of VoiceStream.

11. To ensure that my analysis is complete, I examine in Part III the hypothesis that anticompetitive activities by Deutsche Telekom could explain any decline in the market value of U.S. incumbent wireless carriers. That hypothesis must be rejected, however, because Deutsche Telekom cannot engage in predatory pricing and cross-subsidization in the U.S. wireless telecommunications market. Deutsche Telekom does not benefit from subsidized capital. Its

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3. COMPETITION AND REGULATION IN TELECOMMUNICATIONS: EXAMINING GERMANY AND AMERICA (J. Gregory Sidak, Christoph Engel & Günter Knieps, eds., Kluwer Academic Press 2000).

bond ratings and weighted-average cost of capital are inconsistent with the credit-subsidization hypothesis. Moreover, Deutsche Telekom does not have the *incentive* to engage in predatory behavior in the U.S. wireless telecommunications market largely due to certain characteristics of the wireless telecommunications industry. In particular, the low variable costs and durability of spectrum ensure that no predatory policy would ever pay off in the long term. Because these anticompetitive concerns do not arise in the case of this transaction, any losses suffered by incumbent wireless carriers will result from greater competition in the market rather than anticompetitive behavior on the part of Deutsche Telekom or VoiceStream. Finally, Deutsche Telekom does not have the *opportunity* to engage in predatory behavior because (1) Deutsche Telekom must pursue profit maximization and (2) in Germany, Deutsche Telekom faces competitive telecommunications markets as well as effective and transparent regulation.

I. THE CONSUMER BENEFITS OF DIRECT FOREIGN INVESTMENT STILL OBTAIN WHEN THE INVESTING COMPANY IS PARTIALLY OWNED BY A GOVERNMENT

12. American consumers gain from foreign direct investment in the U.S. market for telecommunications services. That is so for at least three reasons. First, foreign investment can increase competition in the market for telecommunications services in the United States and thus improve quality and decrease prices for American consumers. As Gary C. Hufbauer and Edward M. Graham of the Institute for International Economics commented in this proceeding, "[t]he larger the number of telecom giants operating in the U.S. market, the keener the competition, the lower the prices, the faster the innovation—all propelling the new economy."[4]

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4. Comments of IIE, Attachment at 3.

13. Second, foreign direct investment increases the supply of capital in the United States. That influx decreases the cost of capital for U.S. telecommunications firms—particularly the riskier upstarts—and thus enables them to fund greater levels of expansion and service enhancements than would be possible in the presence of a higher cost of capital. A lower cost of capital eventually works its way into lower prices, which again benefits U.S. consumers.

14. Third, foreign direct investment may generate beneficial spillovers for U.S. telecommunications firms. Those benefits consist of the transfer of new technology and management practices to U.S. firms and their workers. Americans may be accustomed to thinking that U.S. firms consistently are in the vanguard of new technologies. Certainly, in the case of wireless telecommunications services, however, several other nations are more advanced than the United States in terms of customer penetration and the breadth of service offerings. Again, these spillovers of technology and management expertise benefit U.S. consumers.

15. There is no reason to believe that these significant benefits to U.S. consumers from foreign investment would not accrue if the foreign firm making the investment were still undergoing the process of privatization. Each of these benefits is unrelated to the nature of the shareholders of the investing company.

16. Consider now some specific consumer benefits that will flow from Deutsche Telekom's acquisition of VoiceStream. (These points hold with even greater force when VoiceStream's announced acquisition of Powertel, Inc. is considered.) The combination will allow VoiceStream to compete more effectively with U.S. incumbent wireless carriers. To the extent that the transaction can enable VoiceStream to achieve cost savings or improve its access to capital, VoiceStream will more readily enter new markets and thus induce competitors to lower their prices. Moreover, lower marginal costs resulting from the merger will enable VoiceStream

to lower its prices, which, in turn, will induce its wireless competitors to lower their prices. The resulting lower U.S. wireless prices will generate substantial consumer surplus. VoiceStream's acquisition of Powertel will accentuate these benefits by filling out VoiceStream's footprint in the United States. Furthermore, the combined global GSM footprint of VoiceStream in the United States and Deutsche Telekom in Europe will allow U.S. customers to have a worldwide voicemail access number by using a global numbering system, and pre-paid service purchased in one country will be usable in other countries.

II. WHICH PRODUCERS COULD BE HARMED BY FOREIGN GOVERNMENT INVESTMENT?

17. Some might argue that the benefits to U.S. consumer welfare from investment by companies with foreign government partial ownership come at the expense of U.S. companies. Put in economic terms, do the gains in consumer welfare come at the expense of producer welfare? To begin to answer that question, one must immediately ask two more. First, *which* constituencies of American producers benefit or suffer from the foreign investment in question? Second, if a particular constituency of American producers suffers as a result of the foreign investment, is that harm something from which those producers have a legal right to be protected? With respect to the acquisition of VoiceStream by Deutsche Telekom, there are four identifiable constituencies of producers affected by the transaction. Three of them clearly benefit. The fourth does not, but for reasons that should not raise policy concerns.

18. American companies that are major users of wireless telecommunications services form the first producer constituency that will benefit from the acquisition of VoiceStream by Deutsche Telekom because, as explained above, the transaction will lead to more intense

competition over price, quality, and service innovations. For these firms, the cost of an important input will fall and the quality of service will rise.

19. VoiceStream and its shareholders form the second producer constituency that obviously benefits from Deutsche Telekom's acquisition. (The same is true of Powertel and other wireless carriers that use the GSM standard.) VoiceStream will be a more effective competitor, and the increased value of the company is reflected in the premium that Deutsche Telekom will pay over VoiceStream's previous market price.

20. U.S. manufacturers of telecommunications equipment are a third producer constituency that will benefit from Deutsche Telekom's acquisition of VoiceStream. An acquisition that leads to lower prices and raises output of wireless services in turn increases the demand for complementary equipment, including handsets, base stations, switches, and the like. The expanded demand for telecommunications equipment is also a good proxy for consumer-welfare effects in the telecommunications services market.

21. In contrast to these three producer constituencies, incumbent wireless carriers in the United States clearly will suffer from Deutsche Telekom's acquisition of VoiceStream. The competitive effects on incumbent wireless carriers come from two distinct sources. First, the incumbents will face more competition for customers and thus face downward pressure on prices. Second, in spectrum auctions, the incumbents will confront a more robust bidder and thus face upward pressure on the amounts that they must pay the U.S. Treasury for spectrum. Neither of those results, however, is one that the incumbent U.S. wireless companies have standing to complain about. Both effects flow from more vigorous competition.

III. THE NEGATIVE EFFECT ON INCUMBENT WIRELESS CARRIERS COULD NOT RESULT FROM ANTICOMPETITIVE BEHAVIOR

22. Consider now the main question raised by opponents of Deutsche Telekom's acquisition of VoiceStream: Could losses to U.S. incumbent wireless carriers result not from greater competition but from anticompetitive behavior that is unique to an entrant that has partial government ownership? Policy makers in the United States might have two kinds of competitive concerns about a firm substantially owned by a foreign government entity.

23. First, the firm might theoretically enjoy an artificially low cost of capital compared with that of companies having no government ownership. If the firm's bonds were backed, explicitly or implicitly, by the full faith and credit of the foreign government, the firm might be able to borrow more cheaply than a company that faces some prospect of failure.

24. Second, the firm with partial government ownership might theoretically be able to cross-subsidize its entry into the U.S. market through supracompetitive pricing at home. This might happen if the firm does not face meaningful competition at home or the regulator in the firm's home market treats the firm leniently as a result of its government ownership.

25. Neither of these competitive concerns fits the facts of Deutsche Telekom and its acquisition of VoiceStream. Let us first consider the fear of government subsidization of capital.

A. Deutsche Telekom Does Not Benefit from Subsidized Capital

26. Deutsche Telekom's debt is not backed, explicitly or implicitly, by the full faith and credit of the German government. Deutsche Telekom does not benefit from any preferential conditions regarding access to capital, such as government guarantees. After January 2, 1995, the date of Deutsche Telekom's registration in the Commercial Register in Germany, the company's

liabilities incurred were no longer guaranteed by the Federal Republic of Germany.[5] Further evidence that Deutsche Telekom does not have a subsidized cost of capital is found in Deutsche Telekom's current credit rating.

1. Deutsche Telekom's Bond Ratings Are Inconsistent with the Credit-Subsidization Hypothesis

27. Deutsche Telekom's bond ratings refute the hypothesis that the company has subsidized capital. As of January 3, 2001, Deutsche Telekom's credit ratings were A2 (Moody's) and AA- (Standard & Poor's), respectively. As Table 1 indicates, the German government is rated significantly higher, at the highest possible rating of AAA.

TABLE 1: CREDIT RATINGS FOR SELECTED GLOBAL TELECOMMUNICATIONS COMPANIES (JANUARY 2001)

Carrier or Government	Standard & Poor's Rating	Moody's Rating
German Government	AAA	Aaa
SBC Communications Inc.	AA-	Aa3
Verizon Communications	A+	A1
British Telecom*	A	A2
AT&T Corp. **/***	A	A2
Deutsche Telekom*	A-	A2
WorldCom Inc.*	A-	A3

Notes: *Standard & Poor's: Negative outlook. ** Standard & Poor's: Negative credit watch. *** Moody's: On watch for possible downgrade.
Sources: Standard & Poor's ratings obtained from Standard & Poor's New York Ratings Desk at (212) 438-2400 on Jan. 2, 2001. Moody's ratings obtained from Moody's New York Rating Desk at (212) 553-0377 on Jan. 2, 2001.

Deutsche Telekom's credit rating not only is significantly lower than the German government's credit rating, but also is below or comparable with the credit ratings of private telecommunications firms in the United States and Europe. For example, Deutsche Telekom's

5. DEUTSCHE TELEKOM AG, PROSPECTUS FOR 200 MILLION ORDINARY SHARES IN THE FORM OF SHARES OR AMERICAN DEPOSITARY SHARES, June 17, 2000, at 23, *available at* <http://www.eoffering.com/company /pdf/deutsche _telekom.pdf> [hereinafter DEUTSCHE TELEKOM PROSPECTUS].

rating is below British Telecom's (A), Verizon's (A+), AT&T's (A), and SBC's (AA-), while WorldCom's credit rating is the same as Deutsche Telekom's, at A-.

28. Deutsche Telekom's most recent bond issue in June of 2000 was very successful because the bonds were priced extremely favorably.[6] Deutsche Telekom issued bonds priced at an interest rate that was equivalent to an A credit rating. At such a rating, the bonds had a lower face value (price), but bear a higher rate of interest. At the time, both major credit agencies, Moody's and Standard & Poor's, placed Deutsche Telekom on a credit watch with a negative outlook, and have since downgraded the company's credit ratings.

2. Deutsche Telekom's Weighted-Average Cost of Capital Is Inconsistent with the Credit-Subsidization Hypothesis

29. A weighted-average cost of capital (WACC) analysis can be used to address the claims the Deutsche Telekom has preferential access to capital by virtue of its partial government ownership. The results of this analysis are also inconsistent with the credit-subsidization hypothesis.

30. A firm's WACC is the expected return on a portfolio of all of that firm's securities.[7] The formula for WACC is simply a weighted-average of the return on equity and the return on debt or:

$$\text{WACC} = D/V\,(r_D)\,(1-t) + E/V\,(r_E),$$

where D is the firm's outstanding debt, E is the market capitalization of the firm's equity, V is the sum of the firm's outstanding debt (D) and the market capitalization of the firm's equity (E),

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6. DEUTSCHE TELEKOM PROSPECTUS, *supra* note 5.
7. *See, e.g.*, RICHARD A. BREALEY & STEWART C. MYERS, PRINCIPLES OF CORPORATE FINANCE 457 (McGraw-Hill, 5th ed., 1996).

r_D is the firm's average borrowing rate, r_E is the firm's return on equity,[8] and t is the corporate income tax rate.[9]

31. To determine whether Deutsche Telekom has preferential access to capital, I computed the weighted-average cost of capital for Deutsche Telekom and other telecommunications operators. If Deutsche Telekom's WACC is not significantly less than the WACC of its global competitors, then one must reject the hypothesis that Deutsche Telekom has the opportunity to engage in predatory tactics in the United States by having preferential access to capital due to its partial government ownership.

32. It is implausible that Deutsche Telekom's cost of capital is subsidized by the German government. As Table 2 shows, Deutsche Telekom's weighted average cost of capital is *higher* than that of Sprint, SBC, AT&T, BellSouth, and Verizon and is roughly equal to British Telecom's cost of capital.

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8. To estimate the firm's return on equity, I use the capital-asset pricing model—that is, the firm's return on equity is equal to the risk-free rate of return plus the product of the firm's "beta" (the sensitivity of a particular stock to market movements) and the excess return on *all* equities.

9. I use the tax rate of the country that hosts the parent company. For example, for Deutsche Telekom, I use the corporate tax rate of Germany, which is 31.65 percent. DEUTSCHE TELEKOM AG 1999 ANNUAL REPORT, SEC FORM 20-F 1999, filed April 19, 2000, at 73 [hereinafter DEUTSCHE TELEKOM ANNUAL REPORT] (According to Deutsche Telekom, "German corporations are subject to corporate income tax at a rate of 40 percent on non-distributed profits and of 30 percent on distributed profits. The corporate income tax liability is subject to a 5.5 percent solidarity surcharge (Solidaritätszuschlag). This results in an effective aggregate charge of 31.65 percent on distributed profits.").

TABLE 2: WEIGHTED AVERAGE COST OF CAPITAL (WACC) FOR MAJOR TELECOMMUNICATIONS COMPANIES

Rank	Company	Weighted Average Cost of Capital	Government Ownership
1	Telmex	15.7	0.0%
2	Qwest	15.7	0.0%
3	Worldcom	13.5	0.0%
4	Vodafone	13.3	0.0%
5	France Telecom	13.0	63.6%
6	Telecom Italia	11.9	3.46%
7	British Telecom	11.9	0.2%
8	Deutsche Telekom	11.7	58.2%
9	Bell Canada	11.7	0.0%
10	SBC	10.8	0.0%
11	Sprint	10.1	0.0%
12	Telefonica	9.9	0.0%
13	AT&T	9.8	0.0%
14	Verizon	8.7	0.0%
15	Bell South	8.6	0.0%
16	Telstra	8.2	50.1%
17	NTT	7.9	53.2%
18	KPN	7.5	43.0%
19	Eircom	7.4	1.1%
20	Telecom New Zealand	7.2	0.0%
	Average	**10.7**	

Note: Classes of non-traded common stock are not included in the market value of current outstanding equity.
Sources: Market risk premium from RICHARD A. BREALEY & STEWART C. MYERS, PRINCIPLES OF CORPORATE FINANCE 146 (McGraw-Hill, 5th ed., 1996). Risk-free rate is the 10-Year Treasury Constant Maturity Rate on December 15, 2000, downloaded from the Federal Reserve Bank of Chicago's web site at http://www.frbchi.org/econinfo/finance/int-rates/const_cd.prn. Betas downloaded from: http://www.nasdaq.com/. Debt borrowing rates, value of debt (which includes current maturities), corporate income tax rates, and shares outstanding taken from, or calculated based on, data from companies' annual reports and publicly available SEC documents. Market prices per share downloaded on January 2, 2001 from various stock exchanges' websites and http://finance.yahoo.com/?u.

33. In short, the theoretical argument that a firm with partial government ownership might have access to subsidized capital simply does not describe Deutsche Telekom. Deutsche Telekom's cost of capital is virtually the same as that of France Télécom, a company with a greater level of government ownership, and that of British Telecom, a company with no appreciable government ownership at all. Clearly, partial government ownership does not determine the cost of capital for global telecommunications carriers.

3. Deutsche Telekom Has No Statutory Privileges or Immunities

34. In addition to the fact that it does not have preferential access to capital, Deutsche Telekom is a private law stock corporation subject to applicable German federal law such as the German Stock Corporation Act and German tax laws.[10] Thus, Deutsche Telekom has the same rights and responsibilities (for example, with regard to taxation) as does any other private enterprise; nor does Deutsche Telekom enjoy tax benefits or any kind of preferential tax treatment.[11] Equally, Deutsche Telekom does not receive state aid, as this would clearly violate European Union legislation prohibiting state aids that would distort competition.[12]

B. Deutsche Telekom Cannot Engage in Predatory Pricing and Cross-Subsidization in the U.S. Wireless Telecommunications Market

35. A critical assumption of the cross-subsidy argument is that Deutsche Telekom would use cross-subsidies to obtain a temporary competitive advantage over its rivals in the U.S. wireless market, with the objective of eliminating competitors. That view implies that Deutsche Telekom would engage in behavior resembling predatory pricing, which is said to occur when a firm incurs a loss with the intention of eliminating rivals and later raising prices to recoup earnings after the rivals have exited the market.[13] That argument has been widely discredited. The published economics literature and the Supreme Court generally agree that predatory pricing is unlikely to succeed because (1) there is little guarantee of successful recoupment, (2) rivals can also incur losses in anticipation of future profits, and (3) new entrants will appear if prices are raised after the

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10. *Id.* at 73-74.
11. *Id.*
12. Treaty Establishing the European Community, art. 87, Feb. 7, 1992, O.J. (C 224) 1 (1992), [1992] 1 C.M.L.R. 573 (1992), as amended by the Treaty of Amsterdam, Oct. 2, 1997, O.J. (C 340) 173 (1997), [1997] 4 E.U.L.R. ¶ 25,500 (1997).
13. *See, e.g.*, WILLIAM J. BAUMOL & J. GREGORY SIDAK, TOWARD COMPETITION IN LOCAL TELEPHONY 63 (MIT Press & AEI Press 1994); DANIEL F. SPULBER, REGULATION AND MARKETS 475-76 (MIT Press 1989); *see also* JOHN R. LOTT JR., ARE PREDATORY COMMITMENTS CREDIBLE?: WHO SHOULD THE COURTS BELIEVE (University of Chicago Press 1999).

existing competitors have exited the industry.[14] Moreover, it is difficult in practice to distinguish low competitive prices from predatory prices and to distinguish low earnings from predatory losses.[15]

36. In the following sections, I apply the traditional theory on predatory behavior to demonstrate that Deutsche Telekom does not have either the incentive or the opportunity to engage in predatory behavior in the U.S. wireless telecommunications market. The German government's partial ownership of Deutsche Telekom during the remaining period of the company's privatization does not create any special concern in this regard.

1. Deutsche Telekom Does Not Have the Incentive to Engage in Predatory Behavior in the U.S. Wireless Telecommunications Market

37. Deutsche Telekom lacks the incentive to engage in predatory behavior in the U.S. wireless telecommunications market because, for at least four reasons, it could never recoup predatory losses. First, the likelihood of cross-subsidization and predatory pricing grows increasingly implausible when one considers that the U.S. wireless market that Deutsche Telekom would enter through its acquisition of VoiceStream has multiple incumbent suppliers with substantial capacity and enormous financial resources. For example, the combined market capitalization of AT&T Wireless ($39.6 billion), Cingular Wireless (the joint venture between BellSouth Corporation ($79.0 billion) and SBC Communications ($170.5 billion)), Nextel ($17.6

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14. *See* Brooke Group Ltd. *v.* Brown & Williamson Tobacco Corp., 509 U.S. 209, 224-26 (1993); Matsushita Elec. Indus. Co. *v.* Zenith Radio Corp., 475 U.S. 574, 589 (1986); ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 144-59 (Free Press, rev. ed. 1993) (Basic Books 1978); YALE BROZEN, CONCENTRATION, MERGERS, AND PUBLIC POLICY 163, 392 (Macmillan Publishing Co. 1982); RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 184-96 (University of Chicago Press 1976); Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 699, 718 (1975); Frank H. Easterbrook, *Predatory Strategies and Counterstrategies*, 48 U. CHI. L. REV. 263 (1981).

15. BORK, *supra* note 14, at 144-55.

billion), Sprint PCS ($16.8 billion), and Verizon ($135.6 billion) was $482.9 billion as of January 3, 2001.[16]

38. Second, the acquisition of VoiceStream will give Deutsche Telekom only about 3 percent of the wireless telecommunications customers in the United States. Such a low market share as a starting point makes it all the more implausible that Deutsche Telekom could capture a commanding market share quickly enough to make a campaign of predatory losses remunerative. Stated differently, Deutsche Telekom would need to capture a significant share of the U.S. wireless market to make the eventual price increase on "captured" customers profitable.

39. Third, the low average variable costs in the delivery of wireless services further diminishes the prospect that predation would be attempted by Deutsche Telekom or any other firm. Economic rationality will prevent a firm from persistently pricing below average variable cost.[17] When prices do not allow for a competitive level of profit—that is, when total revenues are less than total costs—a firm must confront the prospect of shutting down operations. In particular, the firm should continue to operate in the short run if and only if the loss incurred when the firm stays in business (that is, total costs less total revenues) is less than the loss incurred when the firm shuts down (that is, total costs less total variable costs).[18] Because the majority of the costs in developing a wireless network are fixed, the average variable costs for U.S. wireless carriers are very low relative to their respective prices. Hence, a necessary (but not

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16. Information downloaded from Yahoo's web site http://biz.yahoo.com/ at close of trading January 3, 2001.

17. *See, e.g.*, WILLIAM J. BAUMOL & ALAN S. BLINDER, MICROECONOMICS: PRINCIPLES AND POLICY 216-17 (Dryden Press 7th ed. 1997).

18. Hence, the economic decision to remain in operation can be boiled down to the following simple rule: Remain in operation so long as total variable cost is less than total revenue. Because total cost and total revenue are divisible by quantity produced, the rule can be simplified further: A firm would remain in operation so long as average variable cost were less than price. If that condition were not met, the firm would rationally choose to shut down operations. Stated differently, no rational firm would choose to price below average variable cost if its sole objective were maximizing its own profit.

sufficient) condition for a successful predatory strategy would be that Deutsche Telekom would force prices for wireless telecommunications services to fall significantly.

40. The fourth reason that recoupment is impossible and predation therefore implausible is the durability of spectrum. Spectrum does not wear out and cannot be destroyed. It would therefore be impossible for Deutsche Telekom to restrict industry output of wireless telecommunications services and raise prices above incremental costs during the recoupment phase of the predation scenario. Even in the unlikely event that Deutsche Telekom could drive one of the large wireless incumbents into bankruptcy, the bandwidth capacity of that carrier would remain intact, ready for use during and after reorganization to undercut Deutsche Telekom's noncompetitive prices.[19] It is not plausible that Deutsche Telekom could hoard the spectrum of competitors that it had driven from the market, because the FCC (if not also the federal antitrust authorities) would first have to approve a transfer of the relevant licenses from the failed competitors to Deutsche Telekom. In short, if Deutsche Telekom were to attempt predatory pricing in the U.S. wireless market, it could not expect to recoup its investment in sales made below incremental cost.[20]

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19. The FCC has recognized an analogous argument concerning the durability of fiber-optic transmission capacity. *See* Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as Amended; and Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC's Local Exchange Area, Notice of Proposed Rulemaking, CC Dkt. No. 96-149, 11 F.C.C. Rcd. 18,877, 18,943 ¶ 137 (1996) (citing Daniel F. Spulber, *Deregulating Telecommunications*, 12 YALE J. ON REG. 25, 60 (1995); other citations omitted).

20. For similar skepticism of the plausibility of predatory pricing in the U.S. telecommunications market, see PAUL W. MACAVOY, THE FAILURE OF ANTITRUST AND REGULATION TO ESTABLISH COMPETITION IN LONG-DISTANCE TELEPHONE SERVICES 186-90 (MIT Press & AEI Press 1996); Susan Gates, Paul Milgrom & John Roberts, *Deterring Predation in Telecommunications: Are Line-of-Business Restraints Needed?*, 16 MANAGERIAL & DECISION ECON. 427 (1995); Paul S. Brandon & Richard L. Schmalensee, *The Benefits of Releasing the Bell Companies from the Interexchange Restrictions*, 16 MANAGERIAL & DECISION ECON. 349 (1995); Jerry A. Hausman, *Competition in Long-Distance and Telecommunications Markets: Effects of the MFJ*, 16 MANAGERIAL & DECISION ECON. 365 (1995); Kenneth J. Arrow, Dennis W. Carlton & Hal S. Sider, *The Competitive Effects of Line-of-Business Restrictions in Telecommunications*, 16 MANAGERIAL & DECISION ECON. 301 (1995).

41. Because of the inherent durability of spectrum, Deutsche Telekom could never recoup predatory losses incurred in the U.S. mobile telephony market—there would always be competitors in the market. Moreover, the low average variable costs in the delivery of wireless services make it all the more implausible that U.S. carriers would exit the wireless telecommunications market in the face of attempted predation by Deutsche Telekom. Because its expected losses from engaging in predation would outweigh any expected gains, Deutsche Telekom would not have an incentive to engage in predatory behavior.

2. Deutsche Telekom Does Not Have the Opportunity to Engage in Predatory Behavior in the U.S. Wireless Telecommunications Market

42. In addition to lacking the incentive to engage in predation, Deutsche Telekom does not have the *opportunity* to engage in predatory behavior in the U.S. wireless telecommunications market. This is true for two basic reasons. First, Deutsche Telekom is compelled to pursue profit maximization, which is inconsistent with predatory pricing. Second, the German telecommunications market is competitive and therefore denies Deutsche Telekom any reservoir of supracompetitive profits with which it might pay for a strategy of predation in the U.S. wireless telecommunications market.

a. Deutsche Telekom Must Pursue Profit Maximization

43. The partial government ownership of Deutsche Telekom does not relieve the corporation from the objective of profit maximization. Because Deutsche Telekom must compete with other firms for capital, Deutsche Telekom is not able to choose predatory prices (or any other prices) that do not maximize profits.

44. The absence of profit maximization is the critical factor behind the theory that a public enterprise will have a heightened incentive for predatory conduct. But profit maximization necessarily becomes the objective of a firm as soon as it is *at least partly* privatized and listed on

a stock exchange. This insight has critical implications for the competitive significance of the partial government ownership of Deutsche Telekom. It necessarily follows that because Deutsche Telekom is a publicly traded company, it must seek to maximize profit. Plainly, Deutsche Telekom is in the midst of privatization; to ensure successful share offerings in the future, the Kreditanstalt für Wiederaufbau and the German finance ministry have a powerful incentive to see that Deutsche Telekom delivers maximum value to its current shareholders, which is an objective that cannot be reconciled with a strategy of incurring predatory losses in new markets.

b. In Germany, Deutsche Telekom Faces Competitive Telecommunications Markets as Well as Effective and Transparent Regulation

45. The regulatory and competitive conditions of the German wireless and traditional landline telecommunications markets do not provide Deutsche Telekom supracompetitive returns with which to subsidize predatory behavior in the U.S. mobile telephony market. The German telecommunications market was fully liberalized on January 1, 1998. Because there are no foreign ownership restrictions in Germany, many foreign owned companies have entered the market. The level of competition in the German telecommunications market is reflected in the number of licenses and the amount of foreign ownership of those licenses. The German regulatory authority reports that, by the end of June 2000, 305 companies had been granted network or voice telephony licenses.[21] Some 150 companies now offer voice telephony, including more than 50 resellers.[22] At the end of 1999, foreign companies, mostly from North

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21. REGULATORY AUTHORITY FOR TELECOMMUNICATIONS AND POSTS, MID-YEAR REPORT 2000, at 9 (2000) (downloaded from http://www.regtp.de/en/market/start/fs_15.html).

22. *Id.* at 12.

America, held majority stakes in 20 percent of the then-252 licensees, and over 30 percent of the satellite licenses (19 of 59) had been awarded to foreign companies.[23]

46. The pace of telecommunications deregulation in Germany since its landmark legislation in 1996 compares favorably with that in the United States. Table 3 summarizes the regulatory and competitive conditions in Germany and compares them with those in the United States.

TABLE 3: U.S.-GERMAN COMPARISON ON KEY REGULATORY ISSUES IN TELECOMMUNICATIONS, SEPTEMBER 2000

Issue	United States	Germany
Market Entry Conditions		
Foreign Ownership	Foreign ownership of 25% and above of U.S. companies with a radio license requires FCC approval (public interest test).	No foreign ownership restrictions (no public interest test).
License Requirements	FCC section 214 authority required for authorization to provide international basic services (public interest test); dominant carrier regulation for foreign carriers that are dominant in their home markets.	Very liberal licensing regime; no dominant carrier regulation for foreign carriers, no public interest test.
3rd Generation Wireless (3G)	NTIA and the FCC are coordinating on efforts to free up spectrum for third generation services. Their goal is to complete these auctions by September 30, 2002.	RegTP auctioned six licenses in August 2000; no restrictions concerning technology or standards being used.
Intelsat Direct Access	Level III direct access became available to most users in December 1999. All parties obtaining direct access must still pay a 5.58 percent surcharge to COMSAT to compensate it for its costs as Intelsat signatory. Foreign INTELSAT signatories are not permitted to purchase direct access to countries where they control more than 50% of INTELSAT capacity consumed.	Direct access to INTELSAT has been offered since 1995, to foreign and domestic companies alike.

23. *Id.* at 9.

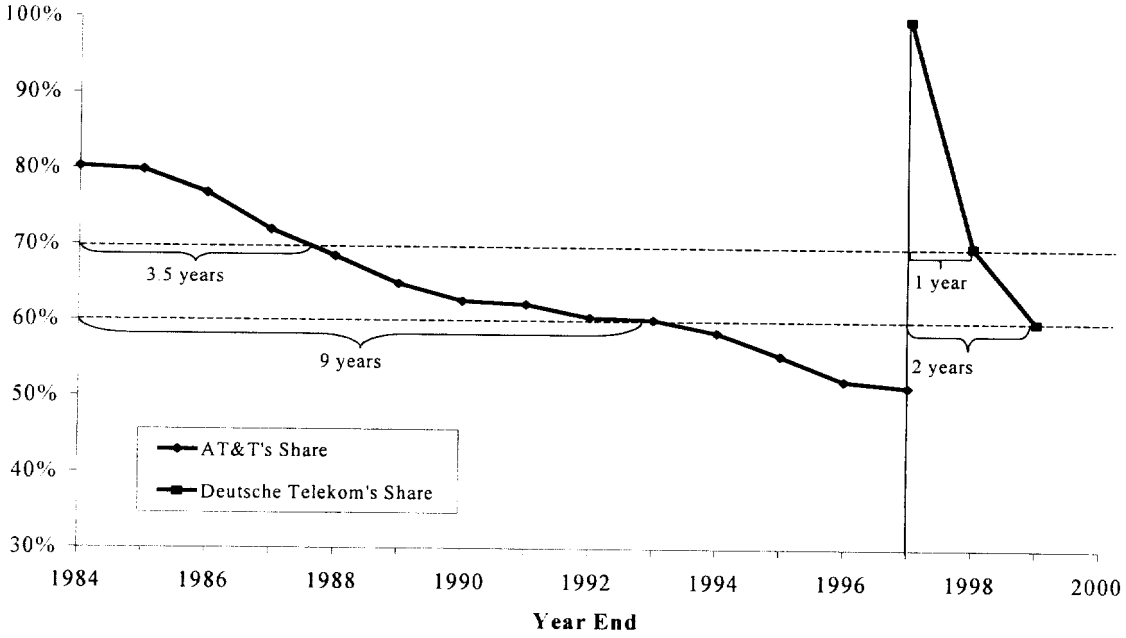
Regulation		
Interconnection	Interconnection is available. Interconnection between local carriers generally falls between 0.3 and 0.5 cents per minute. Following the FCC's access charge reform adopted in May 2000, interstate access charges dropped to 0.955 cents as of Fall 2000. A weighted average of local interconnection rates and access charges would show that current U.S. interconnection rates are approximately 0.6 cents per minute.	Interconnection has been available since January 1998. New tariffs were set by RegTP in December 1999 (24% reduction) and are among the lowest rates worldwide. Local interconnection rates average around 0.7 cents (average of peak and off-peak).
Unbundled Access to the Local Loop	Available. Best practice average of the three states with a population density most similar to Germany (NY, DE, MA) is $14.96. These prices only represent the cost for analog loops. The tariff for a digitally capable loop can be almost twice as expensive as the tariff for an analog loop.	Deutsche Telekom has been obliged to provide unbundled access to the local loop since January 1998. The price is currently set at DM 25.40 per month ($12.70 using 2 DM/$ exchange rate). In Germany, all loops are digitally capable. Thus, the price of an analog local loop in Germany is similar to an analog loop in the United States, whereas the price for a digital loop in Germany is roughly half the price of that in the United States.
Carrier Preselection	Preselection in the United States costs $5. Equal Access Recovery Fund established in the United States: Over the course of 5 years, approximately $1.3 billion was paid by the long-distance carriers to the ILECs to compensate the ILECs' network investment to facilitate carrier preselection.	Deutsche Telekom has made preselection available since January 1998. Current tariff set by RegTP: DM 10 ($5). No recovery of Deutsche Telekom's investment by competitors.
Number Portability	Available. The Telecommunications Act of 1996 allows ILECs to recover number portability costs on a "competitively neutral basis."	Available free-of-charge since January 1998. Deutsche Telekom receives no compensation for costs incurred due to a decision by the RegTP.
Third-Party Billing	Dominant carriers are not obliged to provide third-party billing. The FCC ruled that third-party billing is not a telecommunications service.	Deutsche Telekom is obliged to provide third-party billing (regulated services)
Universal Service Obligation	Provided by ILECs	Deutsche Telekom is the only carrier that is obliged to provide universal service.
Deregulation	Regulation in the long-distance market was lifted for AT&T in 1996, although AT&T still had more than 60% of the market.	Deutsche Telekom is strictly regulated in almost all market segments, although competitors gained 40% of the long-distance market.

Source: Criterion Economics, L.L.C. analysis.

Although interconnection disputes arise in Germany and produce court cases, the same is true in the United States. In the German long-distance market, as Figure 1 shows, the decline in Deutsche Telekom's market share following privatization has occurred much more rapidly than the decline in AT&T's market share occurred following its divestiture. AT&T's share of operating revenues fell from 91 percent to 45 percent during the thirteen-year period from 1984 to 1997, whereas Deutsche Telekom's market share fell from 100 percent to approximately 60 percent in only a two-year period from year-end 1997 to year-end 1999.[24]

24. INDUSTRY ANALYSIS DIVISION, COMMON CARRIER BUREAU, FEDERAL COMMUNICATIONS COMMISSION, TRENDS IN TELEPHONE SERVICE, July 1998 (downloaded from http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/trend298.pdf on August 28, 2000).

FIGURE 1: DECLINE IN LONG-DISTANCE MARKET SHARE FOR AT&T AND DEUTSCHE TELEKOM



Notes: AT&T's share of total access minutes, which includes international minutes, for all U.S. long-distance carriers. Deutsche Telekom's share of domestic long-distance long distance, international, and fixed-to-mobile minutes.
Sources: INDUSTRY ANALYSIS DIVISION, COMMON CARRIER BUREAU, FEDERAL COMMUNICATIONS COMMISSION, TRENDS IN TELEPHONE SERVICE, Table 10.1 (July 1998) (downloaded from http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/trend298.pdf on August 28, 2000); REGULATORY AUTHORITY FOR TELECOMMUNICATIONS AND POSTS, ANNUAL REPORT 1999, at 14 (2000); *Telekom Announces Aggressive Price Policy*, FRANKFURTER ALLGEMEINE ZEITUNG, Nov. 19, 1998, at 21.

47. Indeed, most market segments of the German telecommunications market are already highly competitive and thus subject to vigorous price competition, which in itself provides an effective means of eliminating any chance of excessive pricing to earn monopoly rents. With respect to the local market, Deutsche Telekom is required to provide competitors with unbundled access to its subscriber access lines, and the Regulatory Authority has set a

monthly tariff for this unbundled access that is substantially lower than Deutsche Telekom had sought in its tariff application.

48. With respect to unbundled network access, the U.S. incumbent local exchange carriers are obliged to provide unbundled access to the local loop. The access price is set by state regulators, and thus it varies by state. Using a three-state average of states with similar population density to Germany—New York, Delaware, and Massachusetts—the monthly local loop rate is $14.96, or DM 29.92. The tariff for a digitally capable loop, however, can be almost twice as expensive as the tariff for an analog loop. By comparison, Deutsche Telekom is obliged to provide unbundled access to the local loop at DM 25.40 per month, or 15.1 percent less than the U.S. rate. Moreover, in Germany, *all* loops are digitally capable—thus, while the price of an analog loop in Germany is similar to an analog loop in the United States, the price of a digital loop in Germany is roughly *half* the price of one in the United States.

49. In the national market, the terms on which Deutsche Telekom provides services to competitors are essentially determined by the Regulatory Authority. Although the interconnection rates charged by Deutsche Telekom during 1999 were set by the Ministry for Posts and Telecommunications, the predecessor to the Regulatory Authority, in September 1997, in December 1999, the Regulatory Authority approved new interconnection rates that will apply through January 31, 2001, which are on average approximately 24 percent lower than the previously applicable interconnection rates. The terms for interconnection of Deutsche Telekom's telephone network with networks of other national providers are contained in bilateral contracts. At the end of 1999, Deutsche Telekom had signed 95 such agreements. An additional fifty companies had submitted requests for negotiations at that date. The total number of leased lines provided to carriers at year end (that is, transmission paths that are made available to

competitors in the fixed-line network) rose by 43 percent in 1999 in comparison with the previous year.[25]

50. Although Deutsche Telekom did not face significant competition in the access and local calling markets in 1999, competition in those markets is expected to increase. Various competitors have announced plans for offering local call service using unbundled local loop access, wireless local loop access, and access via power lines. The Regulatory Authority auctioned licenses for wireless local loop services in the summer of 1999. In addition, regulatory inquiries regarding the possibility of requiring further unbundling of local loop access to the local loop are in progress at the European Union level. As a result of these developments, Deutsche Telekom may face substantial competition in the local loop in the near future.[26]

51. In the German wireless market, Deutsche Telekom ranks only second behind the market leader, Vodafone. The wireless market opened earlier than the wireline market. There are four mobile network operators currently serving Germany. The two largest, T-Mobil (T-D1/T-C-Tel) and Mannesmann Mobilfunk (D2), have battled for market leadership since 1990, with D2 currently having a modest edge. Between them, T-Mobil and Mannesmann Mobilfunk serve approximately 79.9 percent of the digital mobile telecommunications market in Germany, based on management estimates, with T-Mobil having an estimated share of 39 percent of this market as of December 31, 1999. E-Plus, the third mobile network operator, entered the market using the GSM 1800 standard in 1994, two years after T-D1 and D2 commenced operations, and held an estimated 16.3 percent of the market at year-end 1999. E2, the fourth network operator, commenced operations in late 1998 using the GSM 1800 standard and currently has an estimated

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25. *Id.* at 89.
26. *Id.* at 129.

market share of 3.9 percent. Licenses for UMTS—or third-generation mobile telecommunications—were auctioned in Germany during the summer of 2000. The auction generated six distinct licensees—the four incumbent wireless carriers plus two entrant carriers backed by France Télécom and by Telefonica and Sonera, respectively. Now Deutsche Telekom must compete for wireless customers against VIAG Interkom (backed by British Telecom), MobilCom Multimedia (backed by France Télécom), Mannesmann MobilFunk (Vodafone), Group 3G (a joint venture between Spain's Telefonica SA and Finland's Sonera Corp.), and KPN's E-Plus Hutchison.[27] Analysts expect that the six distinct licensees will produce "fierce competition" in the German wireless market, making "it more difficult for 3G operators to recoup their license costs."[28]

52. The large number of companies (especially from the United States) that have entered, and continue to enter, nearly all segments of the German telecommunication market ensure that prices in Germany are driven towards competitive levels. That outcome in turn ensures that Deutsche Telekom cannot earn supracompetitive returns with which to fund a predatory strategy in another country. The competitive entry witnessed in the German telecommunication market also indicates that entrants there do not fear cross-subsidization by Deutsche Telekom. Otherwise, for example, firms other than Deutsche Telekom would not have spent $38.5 billion ($46.2 billion total, less $7.7 billion paid by Deutsche Telekom) in August 2000 to acquire licenses for 3G spectrum.[29] For these reasons, it is also highly improbable that,

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27. Auction results downloaded from the German Regulatory Authority for Telecommunications and Posts web site at http://umts.regtp.de/ on Aug. 21, 2000.

28. *German 3G Winners Take Hit From Credit Rating Agency S&P*, TELECOMMUNICATIONS REPORTS DAILY, Aug. 21, 2000 (quoting analysts from Standard & Poor's).

29. *German 3G Spectrum Auction Tops U.K. Bidding Total by $10 Billion*, TELECOMMUNICATIONS REPORTS DAILY, Aug. 17, 2000 (article can be downloaded from http://www.tr.com/online/trd/2000/td081700/Td081700-01.htm)

outside Deutsche Telekom's home market, Deutsche Telekom would pose any actual risk of cross-subsidization, nor would Deutsche Telekom be believed by competitors in those other countries to pose any such risk. It bears emphasis that Deutsche Telekom has not engaged in predatory behavior in other countries where it has acquired a wireless carrier. For example, no complaints have been filed against Deutsche Telekom since it acquired One2One in the United Kingdom in August 1999.[30]

CONCLUSION

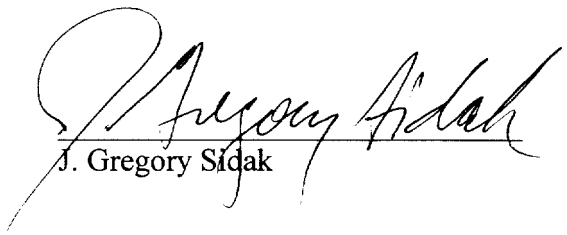
53. A simple cost-benefit analysis of Deutsche Telekom's proposed acquisition of VoiceStream and Powertel demonstrates the social welfare gains resulting from the transactions swamp any possible losses. Consumers clearly stand to gain from increased competition in the form of improved services, lower prices, or both. An invigorated VoiceStream, with access to Deutsche Telekom's technology, expertise, and resources, will provide increased competition in the provision of wireless services in the United States. The consumer welfare gains will come at the "expense" of U.S. incumbent wireless carriers as wireless prices continue to decline toward—*but not below*—average variable costs. Opponents of the merger have implied that impossible outcome by assigning predatory motives to Deutsche Telekom's acquisitions. To achieve any semblance of success, however, Deutsche Telekom would have to drive Verizon, Sprint PCS, AT&T, and Nextel out of the U.S. wireless market. Because of the increasingly competitive landscape in Germany, and because of the financial resources of its U.S. competitors, Deutsche Telekom has neither the incentive nor the ability to engage in predatory

30. Deutsche Telekom AG, *Deutsche Telekom Acquires One2One – Position in Great Britain Significantly Strengthened – Major Step on One of the Most Important Telecommunications Markets*, Company Press Release, Aug. 6, 1999.

pricing in the U.S. wireless market. The Commission should regard those predatory theories as protectionist measures to insulate the domestic wireless industry from competition, and it should approve the proposed merger.

* * *

I declare under penalty of perjury that this declaration is true and correct. Executed this 8th day of January, 2001.



J. Gregory Sidak